Click&Go Plus™ User's Manual

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Click&Go Plus™ User's Manual

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Overview

Moxa's ioLogik 2500 is a remote I/O device designed for smart monitoring applications over Ethernet. With Click&Go Plus™ intelligence built in, the ioLogik 2500 can be configured for simple outputs paired up with simple input triggers, without using a PC controller.

Click&Go Plus™ intelligence allows the ioLogik 2500 to be configured to automatically report I/O events according to user-specified conditions. Simple IF-Then-Else statements are used to specify conditions that are required for certain actions to take place. Up to 8 conditions and 8 actions can be combined in one rule, and up to 48 rules can be defined. Supported actions include sending SNMP traps or TCP/UDP messages to up to 10 hosts at a time.

The following topics are covered in this chapter:

- **Click&Go Plus™ Overview**
- **Click&Go plus ™ Features**
- **Using Click&Go Plus™ Logic**

Click&Go Plus™ Overview

Click&Go Plus™ logic can be managed and configured with the IOxpress utility to handle front-end events. IOxpress's graphical user interface also provides easy access to all status information and ioLogik 2500 settings.

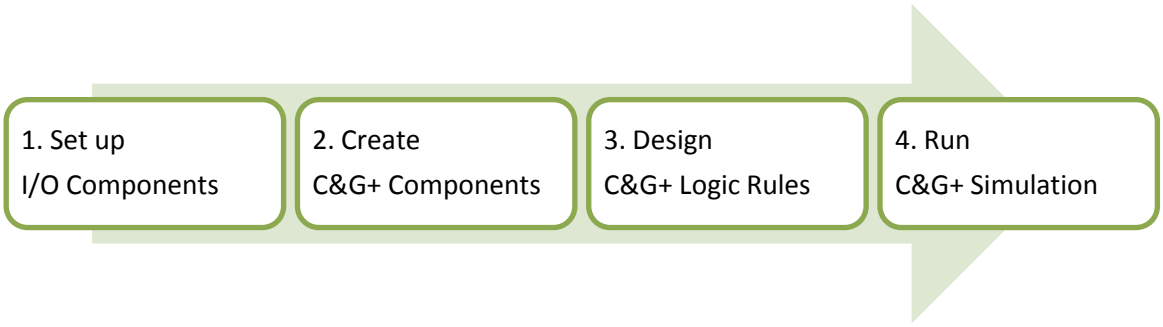
Click&Go plus ™ Features

Click&Go Plus Logic has the following key features:

- Easy local logic control using graphical and intuitive IF-Then-Else style constructions
- Up to 48 user-defined rules
- Choice of email, TCP, UDP, and SNMP trap for active I/O messaging
- Customizable message content with dynamic fields for time, date, IP address, and more
- Up to 10 simultaneous IP destinations for TCP/UDP messaging
- Internal register function for remote output control when Click&Go plus is running
- Timer Delay function for timing events
- Configurable interval for time-triggered events

Using Click&Go Plus™ Logic

The following flowchart shows an overview of the Click&Go Plus ™ Logic configuration process:



More information is available about each of these four topics:

- Setting up I/O Components: See the ioLogik 2500 User's Manual.
- Creating C&G+ Components: See Chapter 2 of this manual.
- Designing C&G+ Logic Rules: See Chapter 3 of this manual.
- Running C&G+ Simulation: See Chapter 4 of this manual.

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Click&Go Plus™ Components

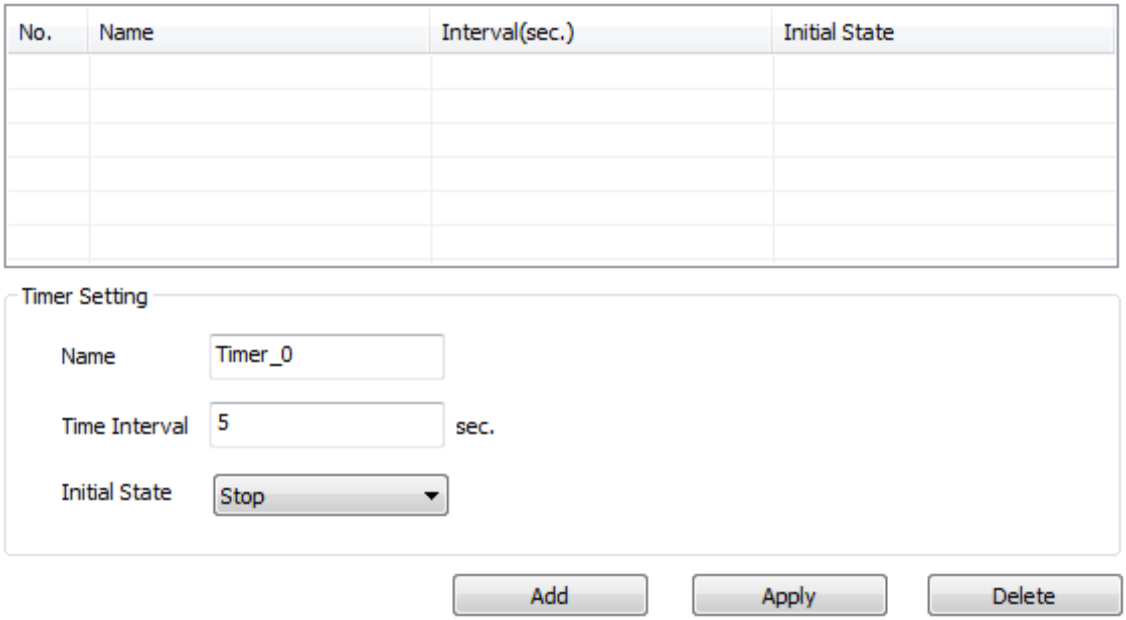
Click&Go Plus™ components can be used to specify conditions and actions that are required for certain actions to take place. Up to 8 conditions and 8 actions can be combined in one rule, and you can define up to 48 rules.

The following topics are covered in this chapter:

- **Timer**
- **SNMP Trap**
- **TCP/UDP Message**
- **Email**
- **Schedule**
- **Internal Register**
- **Remote Action**
- **CGI Commands**

Timer

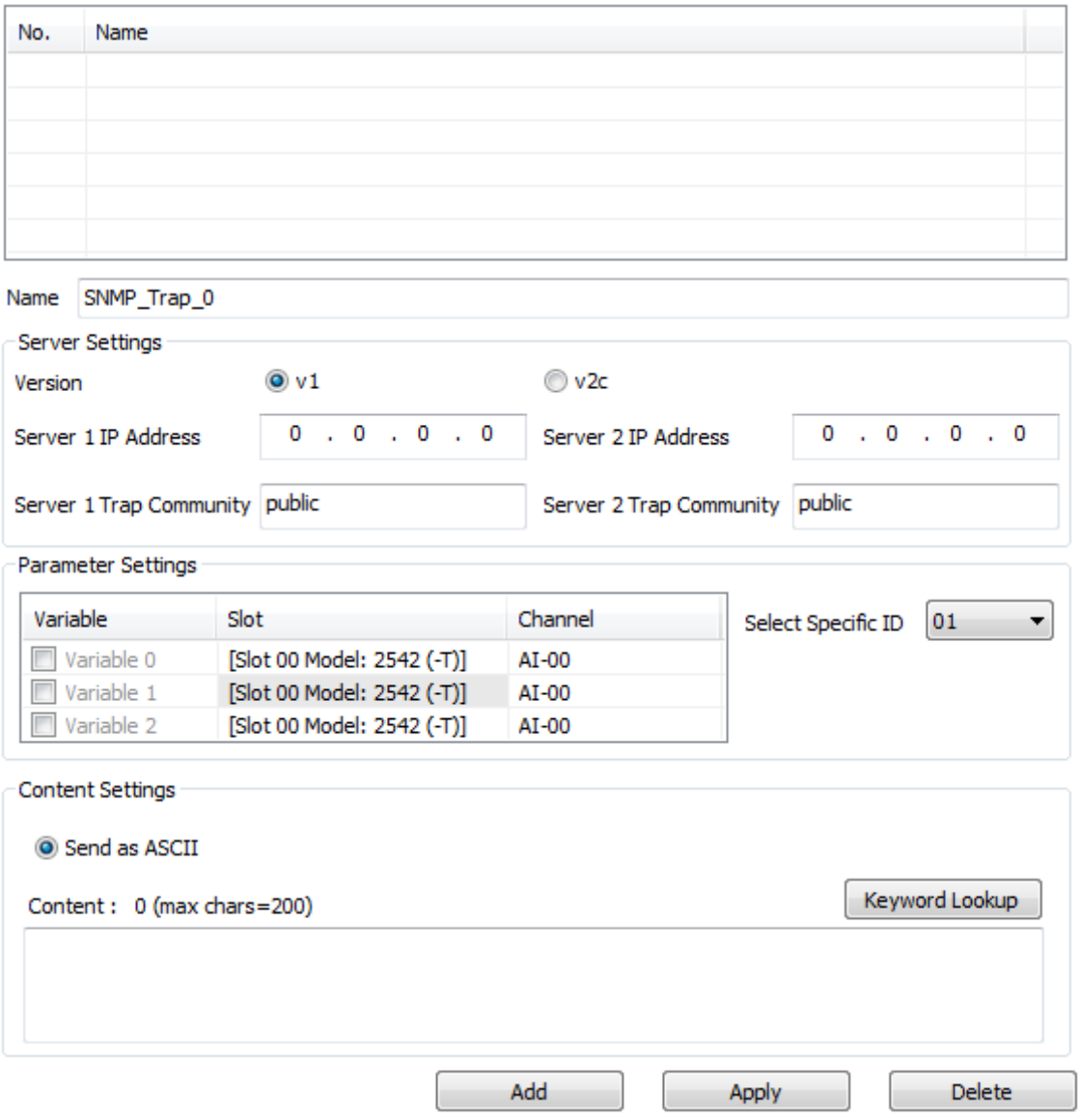
The Timer function can be used to control the timing of logic rules in the IF conditions. Use "Time Interval" to repeat the same action periodically.



SNMP Trap

The ioLogik supports SNMP (Simple Network Management Protocol) v1/v2c to allow monitoring of the network and I/O devices with SNMP Network Management software.

SNMP Trap can be used for THEN/ELSE actions. It is useful for building automation and telecom applications. The SNMP Trap function sends an SNMP trap to one or more IP destinations. The trap number can be any number between 1 and 20. (You may need to consult with your network administrator to determine how trap numbers will be used and defined on your network.)

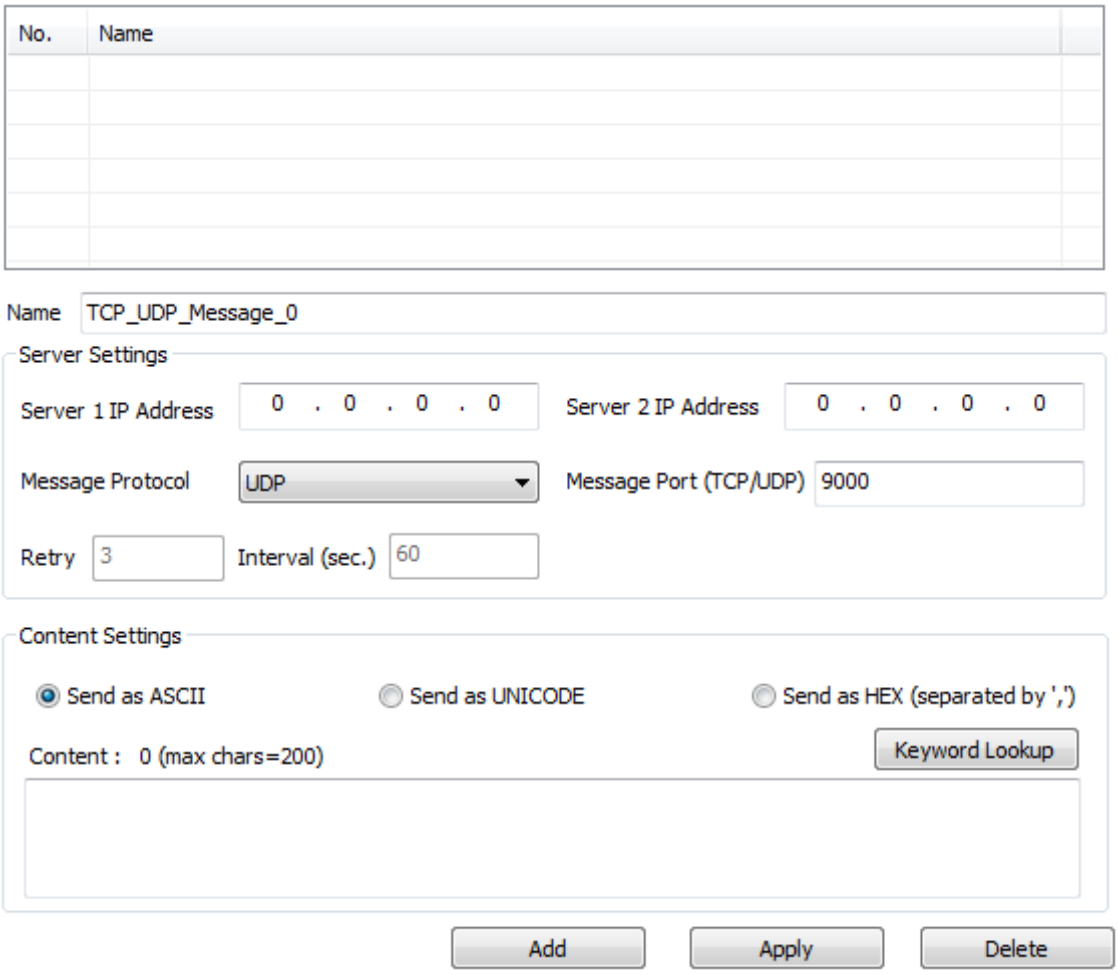


TCP/UDP Message

The TCP/UDP Message feature enables you to configure one or more IP addresses of the Message Servers to which Click&Go Plus logic sends the generated event messages. Click&Go Plus logic sends the defined active message to all addresses listed.

Configure the following fields in the Server Settings area:

- **Server 1/2 IP Address**: Enter the IP address of a message server.
- **Message Protocol**: Select the message protocol (**TCP** or **UDP**) to use from the drop-down list.
- **Message Port**: Set the port number the computer uses to communicate with the device. The default TCP/UDP port number is 9000.
- **Retry**: Enter the number of connection attempts.
- **Interval**: Enter the number of seconds the device will wait before sending an active message.



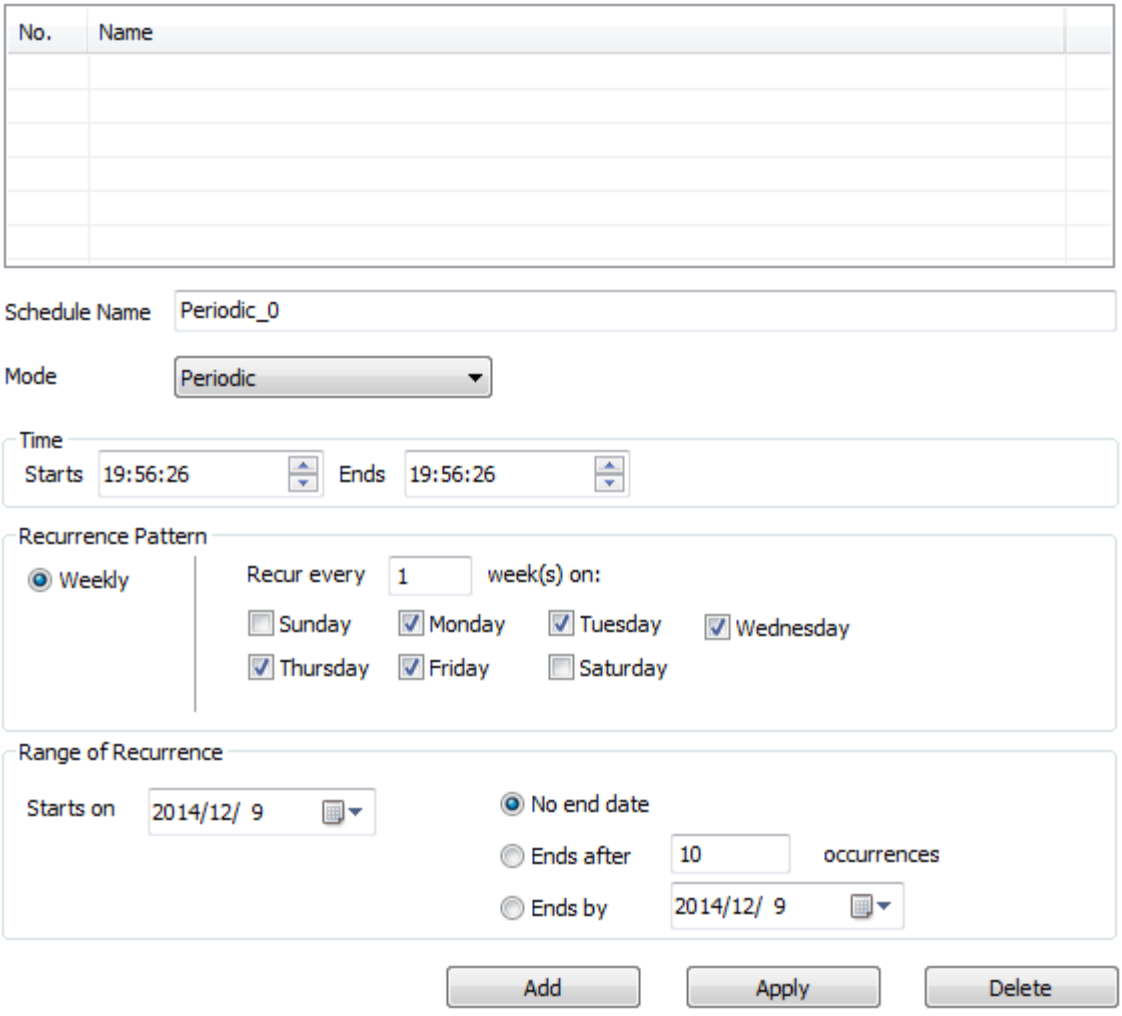
Email

The E-mail function can send a customizable email to one or more mail boxes.

Schedule

The Schedule function can be used in an IF condition. It allows users to set a starting point or time period for a task.

For recurring actions, you can select the relevant weekdays. If a time period needs to be defined, specify the settings in the "Range of Recurrence" column. For example, the Schedule function can be used if a pump needs to start at 9:00 PM and stop at 11:00 PM every Monday, Wednesday, and Friday.



Internal Register

The Internal Register (Integer) represents a status flag to link the status of the first logic to the second one by specifying other actions in the THEN/ELSE fields.

Internal Register Setting (Unsigned Short)

No.	Name	Initial Value
0	Internal Register-00	0
1	Internal Register-01	0
2	Internal Register-02	0
3	Internal Register-03	0
4	Internal Register-04	0
5	Internal Register-05	0
6	Internal Register-06	0
7	Internal Register-07	0
8	Internal Register-08	0
9	Internal Register-09	0

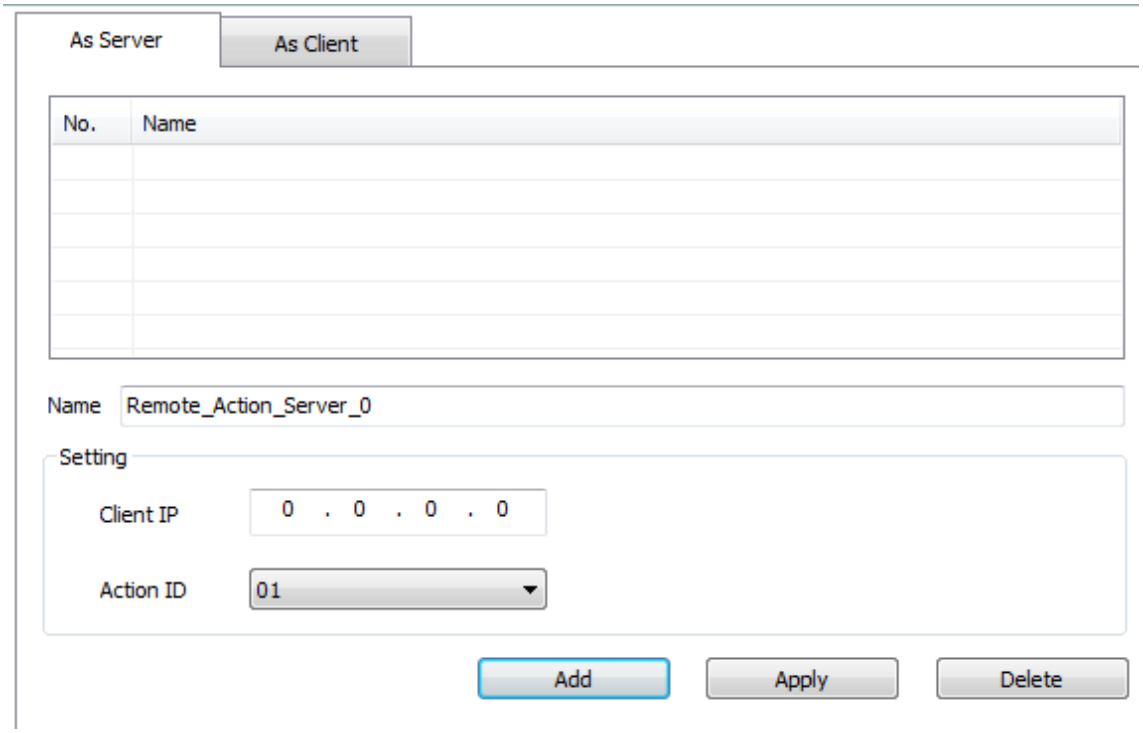
Float Internal Register Setting (Float)

No.	Name	Initial Value
0	Float Internal Register-00	0.000
1	Float Internal Register-01	0.000
2	Float Internal Register-02	0.000
3	Float Internal Register-03	0.000
4	Float Internal Register-04	0.000
5	Float Internal Register-05	0.000
6	Float Internal Register-06	0.000
7	Float Internal Register-07	0.000
8	Float Internal Register-08	0.000
9	Float Internal Register-09	0.000

Remote Action

The Remote Action function can be used to connect between several ioLogik 2500 devices.

- The "As Server" function can be used in IF conditions to trigger the local device.
- The "As Client" function can be used in THEN/ELSE actions to trigger a remote device.



NOTE For "As Server", the device will only be triggered when "Client IP" and "Action ID" match.

CGI Commands

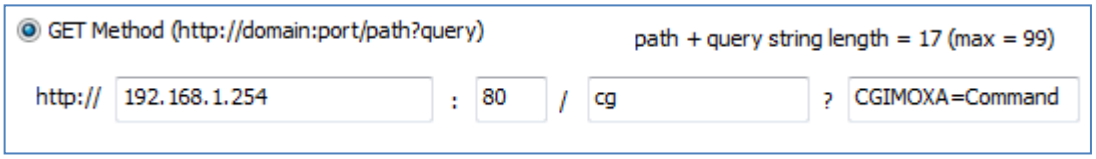
CGI commands can be used with Click&Go Plus. Using a web browser or standard HTTP protocol makes it easier for a security SCADA system to monitor and control an ioLogik 2500 via CGI commands. Using the "as server" option allows the ioLogik 2500 to play the role of server to receive CGI commands, and use CGI commands in Click&Go Plus conditions. Using the "As Client" option allows the ioLogik 2500 to play role of client to send CGI commands, and use CGI commands in Click&Go Plus actions.

NOTE CGI commands are case-sensitive.

The default strings for sending CGI commands to the ioLogik 2500 are:

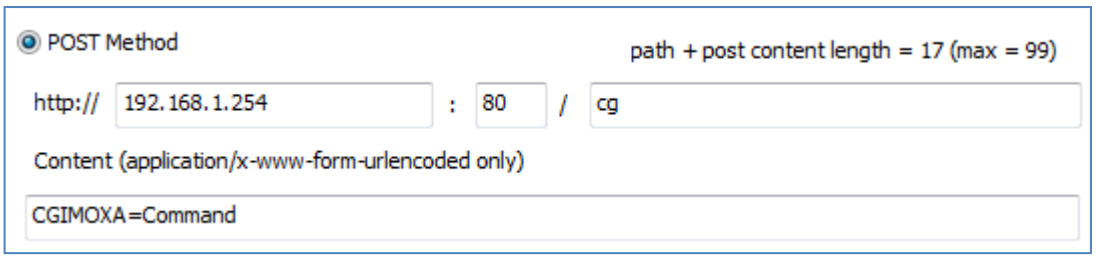
GET Method

http://IP address:Port/cg?CGIMOXA=Command



Post Method

http://IP address:Port/cg?CGIMOXA=Command



3

Click&Go Plus™ Rules

Click&Go Plus logic was developed by Moxa to provide an easy way to program your ioLogik 2500. In this chapter, we explain how to use Click&Go Plus logic to deploy a remote I/O solution.

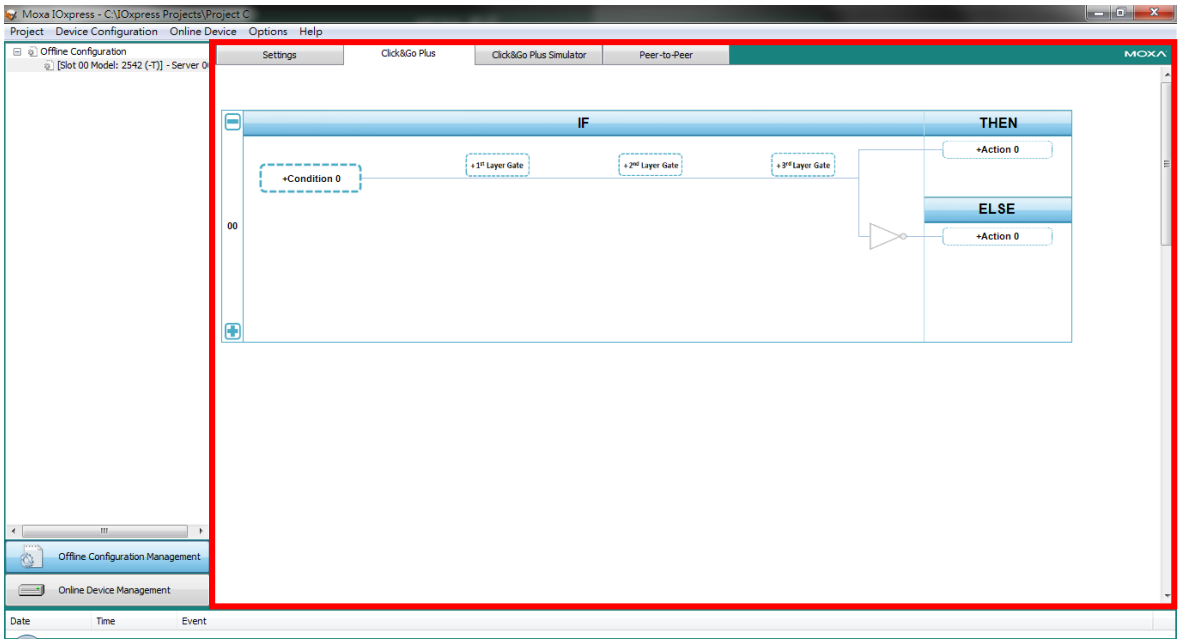
The following topics are covered in this chapter:

- **Click&Go Plus™ Rules**
- **If-THEN-ELSE Conditions**
  - Structural Categories
  - Types of IF Conditions
  - Types of THEN/ELSE Actions
  - List of IF Conditions
  - List of THEN/ELSE Actions

Click&Go Plus™ Rules

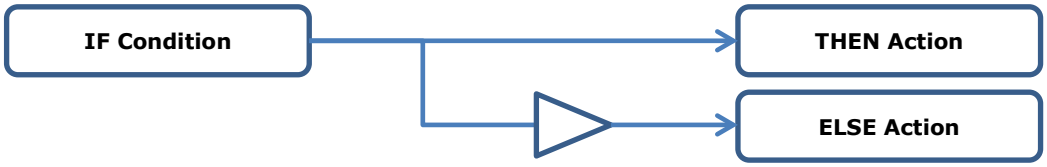
After you finish configure Click&Go components, you can create Click&Go Plus rules. Click&Go Plus logic provides an easy way to program your ioLogik 2500 product for Smart Ethernet Remote I/O operations.

The main Click&Go rules page is shown below.



If-THEN-ELSE Conditions

Structural Categories



Types of IF Conditions

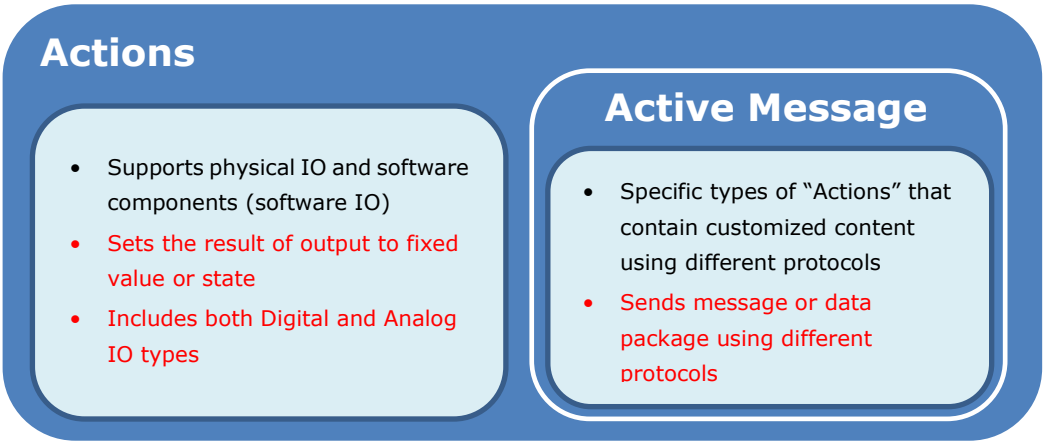
EVENT

- Supports physical IO and software components (software IO)
- Monitors the result of Boolean type output (e.g., True/False, Enable/Disable, Start/Stop)
- Usually used with "Digital" IO types

COMPARISON

- Supports physical IO and software components (software IO)
- Monitors the result of numerical output types
- Usually used with "Analog" IO types

Types of THEN/ELSE Actions


Actions
Supports physical IO and software components (software IO)
Sets the result of output to fixed value or state
Includes both Digital and Analog IO types
Active Message
Specific types of "Actions" that contain customized content using different protocols
Sends message or data package using different protocols

List of IF Conditions

Parameter Type	Parameter	Actions
DI	DI Ch.	ON/OFF/Change /Change from OFF to ON / Change from ON to OFF
DO	DO Ch.	ON/OFF/Change /Change from OFF to ON / Change from ON to OFF
Relay	Relay Ch.	ON/OFF/Change /Change from OFF to ON / Change from ON to OFF
System	Start-Up	TRUE
	Modbus Host Connection Fail	TRUE
Schedule	Schedule #	TRUE
Timer	Timer #	Timeout
Remote Action	Remote Action (Server)	TRUE
SMS	SMS #	TRUE
CGI Command	CGI #	TRUE
Serial TAG (Boolean)	Serial TAG#	TRUE

Parameter Type	Parameter	Operator	Second Parameter
AI	AI Ch.	<, <=, =, >=, >	Constant
Float Internal Register	FIR #	<, <=, =, >=, >	Percentage
Virtual Channel	VC #	<, <=, =, >=, >	Other Parameter
Internal Register	IR#	<, <=, =, >=, >	Constant
Relay Counter (Lifetime)	R Ch.	<, <=, =, >=, >	Other Parameter
Relay Counter (Current)	R Ch.	<, <=, =, >=, >	
Counter	CNT Ch.	<, <=, =, >=, >	
Serial TAG (Float/DWORD/WORD)	Serial TAG #	<, <=, =, >=, >	

List of THEN/ELSE Actions

Parameter Type	Parameter	Actions
DO	DO Ch.	ON/OFF
DO Pulse Output	DO Ch.	START/STOP
Relay	Relay Ch.	ON/OFF
Relay Counter (Current)	Relay Ch.	RESET
Relay Pulse Output	Relay Ch.	START/STOP
Internal Register	IR#	SET TO " "
Float Internal Register	FIR#	SET TO " "
Timer	Timer #	START/STOP/RESTART
Data Log	Profile #	START/STOP
FTP Upload	Profile #	START/STOP
Counter		RESET
Remote Action	Remote Action#	Send
AO	AO Ch.	SET TO " "

Parameter Type	Parameter	Actions
SNMP Trap	Trap #	Send Every "" Sec (0 : Send One Time) . ** Repeat only when IF condition still exist for certain period of time.
TCP/UDP Message	Message #	Send Every "" Sec (0 : Send One Time) . ** Repeat only when IF condition still exist for certain period of time.
E-Mail	e-mail #	Send Every "" Sec (0 : Send One Time) . ** Repeat only when IF condition still exist for certain period of time.
SMS	SMS #	Send Every "" Sec (0 : Send One Time) . ** Repeat only when IF condition still exist for certain period of time.
CGI Command	CGI #	Send Every "" Sec (0 : Send One Time) . ** Repeat only when IF condition still exist for certain period of time.

4

Click&Go Plus™ Simulation

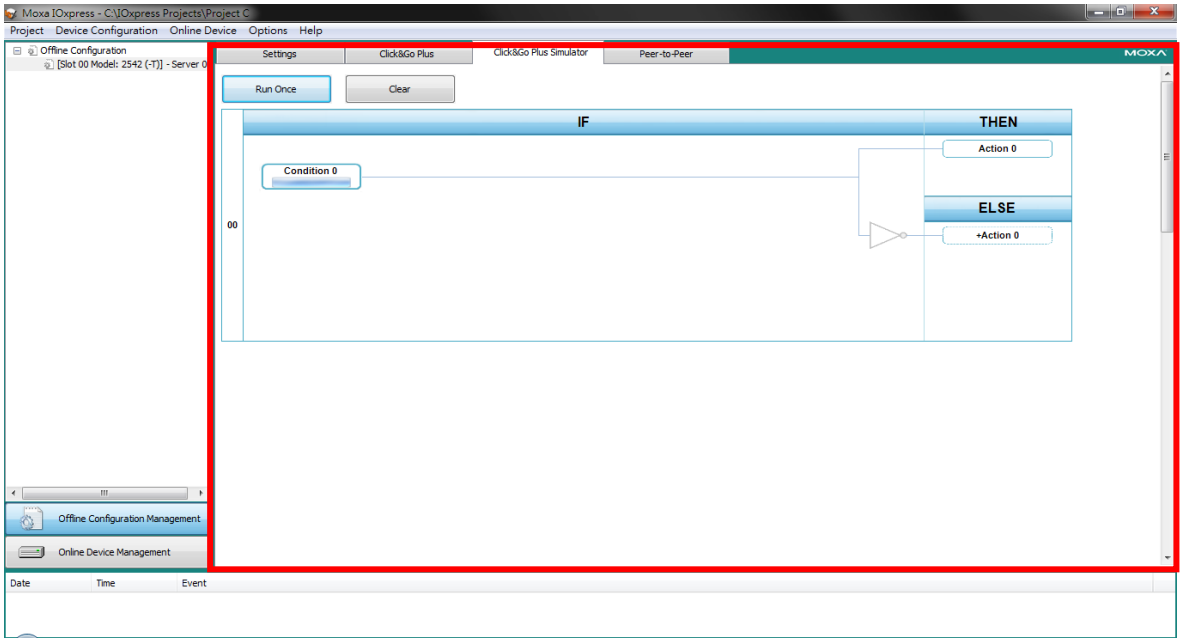
Click&Go Plus Simulation is a tool provided for users to simulate the Click&Go plus rules discussed in Chapter 3.

The following topics are covered in this chapter:

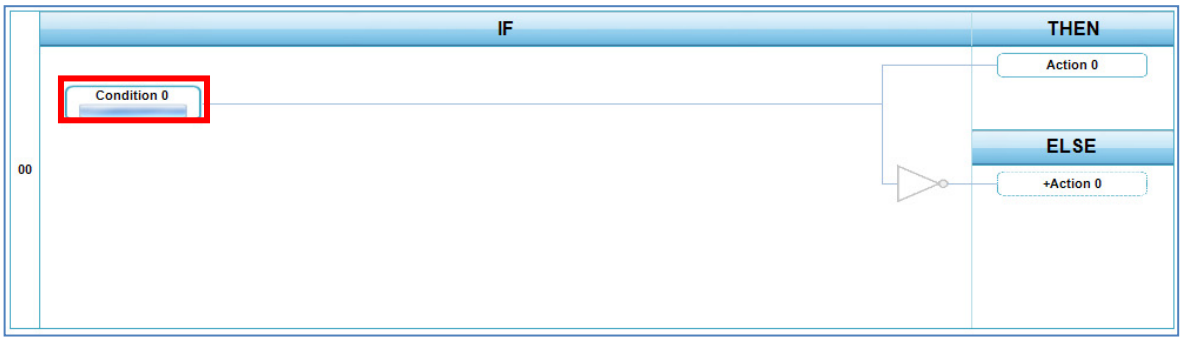
- **Starting a Simulation**

Starting a Simulation

The following figure shows the main settings page of Click&Go rules.



Click the conditions tab to change the status of a condition. All of the relevant information will be shown in the Log Messages column.



Date	Time	Event
2014/08/28	10:04:18	[Rule_0][Condition 0]Set [Slot 00 Model: 2542 (-T)] DIO-00(DI) = ON

Click "Run Once" to start a simulation. The simulation result will be shown as T (True) or F (False).